



S3-4

## Korean Emigrant Study

Myung-Hee Shin<sup>1</sup>, Mi-Kyung Kim<sup>2</sup>, Zhongmin Li<sup>3</sup>

*Sungkyunkwan University, Hanyang University, Jilin University*

**Study background:** Immigrant studies are valued for its ability to dissociate the effect of genetic and environmental factors. Koreans have immigrated to adjacent countries, such as China and Japan, for more than 120 years, but their lifestyle change and health status are seldom studied. We aimed to establish a Korean emigrant cohort to investigate the association between the genetic profile and life-style change and cardiovascular diseases and diabetes among Koreans, Han-Chinese, and Japanese.

**Method:** We selected three sites for our study; Kobe/Osaka(Japan), Jilin(China), and Yanbian(China). In each site, equal numbers of Korean emigrants and host-country residents were recruited. The inclusion criteria of Korean emigrants were 1) He/she should have more than 50% of Korean blood, 2) He/she had been living in the host country for more than 15 years. All participants must be aged 40-70. We developed a questionnaire to measure life-style characteristics and detailed protocol for the health examinations and bio-specimen handling. For diet, three new food frequency questionnaire (FFQ) were developed for each site. A participant would visit the cohort examination facility, get a full health examination, answer the 1-hour long questionnaire interview, and donate the blood for bio-specimen bank. Three concurrent dietary validation studies were conducted for each FFQ, collecting four 3-day 24-hour recalls as gold standards for dietary intake in each person. We will follow-up the cohort members to detect the new development of cardiovascular diseases and diabetes, by biennial re-examination and periodic contact.

**Results:** The total recruitment number was 146 for Kobe/Osaka, 513 for Yanbian, and 541 for Jilin. These numbers represents the number of fully completed cases, i.e., the number of participants with completed questionnaire and enough amount of serum, plasma, urine and DNA samples. According to the preliminary analysis, Koreans living in China were not well aware of their immigration history, while Koreans living in Japan knew detailed history. Koreans were smaller than Han-Chinese, had higher serum cholesterol levels, higher liver enzyme levels, and higher blood pressures.

**Conclusion:** We will continue to recruit the cohort members until at least 1000 members in each site are completed. Our data will be an invaluable source for many studies looking at gene-gene, gene-environmental factor interactions among Asians.